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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/853,434	05/10/2001	Duane A. Goetsch	1.905.4	6758

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EXAMINER

LANGEL, WAYNE A

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

853434

Applicant(s)

Goetsch et al

Examiner

Langel

Group Art Unit

1754

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address —

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

☒ Responsive to communication(s) filed on 12-17-03

☒ This action is **FINAL**.

- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

☒ Claim(s) 1-14, 17-19 and 23-30 is/are pending in the application.

Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-14, 17-19 and 23-30 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

## Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☐ All ☐ Some\* ☐ None of the:

☐ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

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The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Rosenblatt et al. in view of Ohtsuka (newly cited) or Kordesch et al. (newly cited) or Lindstrom (newly cited). Rosenblatt et al. is relied upon as discussed in the last Office action. The difference between the process disclosed by Rosenblatt et al., and that recited in claims 1-11 and 28, is that Rosenblatt et al. do not disclose that nickel should be employed as the catalyst for maintaining an autothermal reaction with ammonia. It would be prima facie obvious from Ohtsuka or Kordesch et al. or Lindstrom to substitute nickel for the ruthenium, rhodium or iridium catalyst of Rosenblatt et al., since Ohtsuka et al., Kordesch et al. and Lindstrom all establish the equivalence between nickel and platinum group metals as suitable catalysts for the decomposition of ammonia. (See paragraph [0016] of Ohtsuka; paragraph [0010] of Kordesch et al.; and column 3, lines 42-47 of Lindstrom.) Applicant's argument,

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that Rosenblatt et al. do not suggest or teach the use of a nickel catalyst alone for the autothermal production of nitrogen and hydrogen from ammonia wherein both combustion and decomposition occur over a single catalyst, is not convincing, since it would be expected from Ohtsuka et al., Kordesch et al. or Lindstrom that nickel would catalyze both the exothermic and endothermic reactions in the autothermal production of nitrogen and hydrogen from ammonia wherein both combustion and decomposition occur, since Ohtsuka et al., Kordesch et al. and Lindstrom all establish at the aforementioned passages the equivalence between nickel and such platinum group metals as platinum and ruthenium for the decomposition of ammonia. It would be expected that such a transition metal as nickel would also function as the combustion catalyst to provide the exothermic heat of reaction to sustain the endothermic decomposition of the ammonia.

Claims 12-14, 17-19, 23-27, 29 and 30 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Boffito et al. in view of Rosenblatt et al., further in view of Ohtsuka et al. or Kordesch et al. or Lindstrom. Boffito et al. and Rosenblatt et al. are relied upon as discussed in the last Office action. It would be further obvious from Ohtsuka et al. or Kordesch et al. or Lindstrom to substitute nickel as the decomposition catalyst in the process of Boffito et al., since Ohtsuka et al., Kordesch

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et al. and Lindstrom establish the equivalence between nickel and platinum group metals as the decomposition catalyst, and Rosenblatt et al. in view of Ohtsuka et al., Kordesch et al. or Lindstrom would suggest to one of ordinary skill in the art that nickel could function as both the decomposition and combustion catalyst in the process.

Claims 12-14, 17-19, 23-27, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenblatt et al. in view of Ohtsuka et al. or Kordesch et al. or Lindstrom as applied to claim 1 above, and further in view of Boffito et al. It would be prima facie obvious from Boffito et al. to employ the hydrogen produced in the process of Rosenblatt et al. to power an internal combustion engine or to operate a fuel cell, since Boffito et al. disclose such uses for hydrogen in the Abstract, and one of ordinary skill in the art would recognize that the hydrogen produced according to the process of Rosenblatt et al. could be employed for any known or conventional uses.

Applicant's amendment necessitated the new grounds of rejection. Accordingly, **THIS ACTION IS MADE FINAL**. See M.P.E.P. § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS

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ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wayne A. Langel whose telephone number is (571) 272-1353. The examiner can normally be reached on Monday through Friday from 8 A.M. to 3:30 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman, can be reached on (571) 272-1358. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-0994.

WAL:cdc

January 21, 2004

*Wayne A. Langel*  
WAYNE A. LANGEL  
PRIMARY EXAMINER